REMARKS

The Examiner's action dated February 26, 2007, has been received, and its contents carefully noted.

Before discussing the Amendments made to the claims and the merits of the prior art rejections, it is believed appropriate to provide a brief explanation of the fundamental and significant differences between the present invention and the applied reference, RUUMPOL.

Specifically, the present invention is directed to a device for measurement of distances in multiple directions of an electrically conductive body by measuring eddy currents induced in the conductive body in response to movement of the conductive body. In clear contrast, the applied reference is directed to a device for performing measurements on a non-conductive body on the basis of changes in the inductive coupling between a field coil and pick-of coils. In brief, the reference device is only capable of sensing inductive changes resulting from the movements of a non-conductive body, whereas the present invention senses eddy currents resulting from movements of a conductive body.

Thus, the prior art rejections presented in the Action are traversed for the reason that the applied reference does not anticipate or render obvious the present invention, as now claimed.

In order to more clearly define the contribution of the invention over the prior art, claim 1 has been amended to include the subject matter of original claims 4 and 5, which has been cancelled, and claim 1 has been further amended to include a positive recitation of a high-frequency generator for feeding a high-frequency current to at least one first inductive element to generate a high-frequency magnetic field, the frequency being sufficiently high that a substantial part of the field does not enter the conductive body due to eddy currents being formed in the conductive body, and a signal processing arrangement for detecting output signals from the second inductive elements or other magnetic field sensors, for detecting a movement of the magnetic field in a second direction in consequence of eddy currents.

Clear support for the recitations added to claim 1 will be found in original claims 4 and 5 and in the specification at page 4, the paragraph beginning with "Fig. 1 shows", page 5, last paragraph and page 6, first full paragraph.

Claims 2, 3, 6 and 7 have been amended to provide terminology consistent with that now employed in claim 1 and claim 2 has been further amended by deletion of the recitation of the preferred form of the coils, which limitation has been added in new claim 11.

Dependent claim 12 has been added to define a further feature of the invention. Support for the subject matter presented in claim 12 will be found in the specification at page 3 lines 11-15.

Additional method claims 13-16 have been added to further define the contribution of the invention over the prior art. It is noted that the application as filed, already included method claims 9 and 10.

Claims 13 and 14 set forth methods that correspond to the functions performed by the component defined in claim 1. Thus, support for these limitations will be found in the specification, at the locations of previously cited with respect to the recitations added to claim 1. The recitations appearing in claims 15 and 16 corresponds to those presented in original claims 9 and 10.

As has already been pointed out above, the applied reference relates only to measurements performed on a non-conductive body. Specifically, the reference discloses that body 10 to be tested is made of a ferrite material (column 1, lines 17-20). Ferrites are electrically non-conductive ferromagnetic ceramic compound materials. As evidence of this, enclosed is a print-out from the "Encyclopedic Dictionary of Electronics and Nuclear Engineering", London, 1959. A similar definition can be found in the online

encyclopedia Wikipedia, which defines ferrites as "electrically non-conductive ferromagnetic ceramic compound materials, consisting of various mixtures of iron oxides such as hematite (Fe_2O_3) or magnetite (Fe_3O_4) and the oxides of other metals. A copy of the relevant Wikipedia print-out is also attached hereto.

While the exact chemical definitions of ferrite may vary, all sources agree that ferrites are generally non-conductive. Therefore, a person skilled in the art would clearly understand that body 10 of the reference is non-conductive, whereas, as already mentioned above, the present invention relates to measurements performed on electrically conductive bodies.

Since ferrite body 10 of the reference acts as a magnetic core (column 1, lines 8-11) movements of body 10 will change the inductive coupling between field coil 1 and pick-up coils 8; the closer the ferrite body comes to a particular pick-up coil, the larger the voltage induced in that coil (column 1, lines 56-67. Thus, the reference clearly discloses an inductive sensor.

In contrast, the device according to the present invention functions as an eddy current sensor and is constructed to measure an electrically conductive body. The device according to the invention causes eddy currents to flow

in the body. These eddy currents tend to suppress the magnetic field within the body if the exciting frequency is sufficiently high. Therefore, the magnetic field generated by the first inductive element will be concentrated in the gap between the body and the inductive element. A small displacement of the body will thus lead to a large change in flux density along the direction of displacement.

It should thus be abundantly clear that the device according to the present invention operates according to a completely different principle from, and yields a substantially improved sensitivity over, the device disclosed in the applied reference.

In view of the recitations now appearing in claim 1, particularly relating to the fact that eddy currents are formed in the body being tested and that the signal processing arrangement is adapted for detecting a movement of the high frequency field in consequence of eddy currents, it is clear that claim 1 is neither anticipated by, nor obvious in view of, the teachings of the applied reference.

New independent claim 13 distinguishes over the applied reference in a similar manner by its recitation of a method for measurement with respect to an electrically conductive body and by its recitation of the step of feeding a high frequency current having a frequency high enough for a

substantial part of the magnetic field to not be able to enter the conductive body due to eddy currents being formed in the conductive body.

Claim 14 further distinguishes over the applied reference by its recitation of a detecting step for sensing a movement of the high frequency magnetic field in consequence of eddy currents.

In view of the foregoing, it is requested that the rejections of record be reconsidered and withdrawn, that claims 1-3 and 6-16 be allowed and that the application be found in allowable condition.

If the above amendment should not now place the application in condition for allowance, the Examiner is invited to call undersigned counsel to resolve any remaining issues.

Respectfully submitted,

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